

DaimlerChrysler AG

Patent claims

- 5 1. A method for controlling the operation of a
reversible belt retractor to release a belt
extraction lock, which can be activated by an
acceleration sensor, wherein, after the belt
10 retractor has been triggered as a consequence of a
hazardous situation having been detected and after
the hazardous situation has been recognized as
being over, the operation of the belt retractor is
controlled by a release signal at a release time
15 in order to bring about the release of the belt
extraction lock to shift it from a blocking state
into a comfort-providing state, characterized in
that the release time is determined by means of a
sensor model algorithm based on a model of the
20 acceleration sensor with at least one variable
characterizing the running dynamics being used.
2. The method as claimed in claim 1, characterized in
that the release time is determined as being a
time at which the sensor model algorithm reveals
25 that the acceleration detected by the acceleration
sensor is smaller than a specifiable acceleration
threshold value.
3. The method as claimed in claim 2, characterized in
30 that the release time is determined as being a
time at which the sensor model reveals that the
acceleration detected by the acceleration sensor
has dropped below a specifiable acceleration
threshold value for at least a specifiable period
35 of time.
4. The method as claimed in one of claims 1 to 3,

characterized in that the acceleration sensor is a mechanical sensor and the sensor model is a mathematical model of the mechanical sensor.

- 5 5. The method as claimed in one of claims 1 to 4,
characterized in that in order to determine the
release time, use is made of the transverse
acceleration, the wheel speeds or the yaw
acceleration of the vehicle.
- 10
6. The method as claimed in claim 5, characterized in
that in order to determine the release time, use
is made of the transverse acceleration and the
wheel speeds and the yaw acceleration of the
15 vehicle.